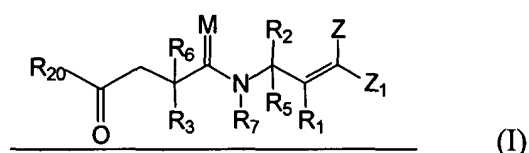


IN THE CLAIMS:

1-29. (Canceled).

30. (Currently Amended) A method of treating a mammalian disease condition mediated by picornaviral protease activity that comprises the step of administering to a mammal in need thereof a therapeutically effective amount of at least one compound ~~as defined in claim 1 or a pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof~~ of the formula (I):

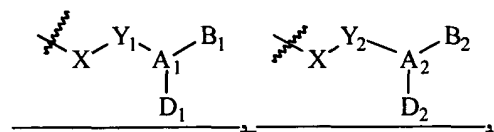


wherein

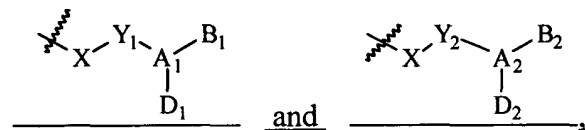
M is O or S;

R₁ is H, F, an alkyl group, OH, SH, or an O-alkyl group;

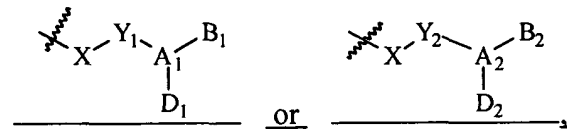
R₂ and R₅ are independently selected from H,



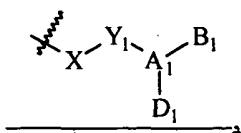
or an alkyl group, wherein said alkyl group is different from



with the proviso that at least one of R₂ or R₅ must be



and wherein, when R₂ or R₅ is



X is =CH or =CF and Y₁ is =CH or =CF,

or X and Y₁ together with Q' form a three-membered ring in which Q' is - C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₁ is -CH-, -CF-, or -C(alkyl)-, where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group,

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₁ is -O-, -S-, -NR₁₂-, -C(R₁₃)(R₁₄)-, -C(O)-, -C(S)-, or -C(CR₁₃R₁₄)-,

wherein R₁₂ is H or alkyl, and R₁₃ and R₁₄ independently are H, F, or an alkyl group, or, together with the atoms to which they are bonded, form a cycloalkyl group or a heterocycloalkyl group;

A₁ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R₁₆,

wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are bonded, form a heterocycloalkyl group;

D₁ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;

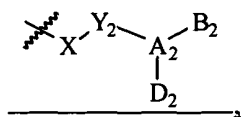
and

B₁ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇-, -SR₁₇-, -NR₁₇R₁₈-, -NR₁₉NR₁₇R₁₈-, or -NR₁₇OR₁₈-,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

and with the provisos that when D₁ is the moiety ≡N with a lone pair of electrons capable of forming a hydrogen bond, B₁ does not exist; and when A₁ is an sp³ carbon, B₁ is not -

NR₁₇R₁₈ when D₁ is the moiety -NR₂₅R₂₆ with a lone pair of electrons capable of forming a hydrogen bond, wherein R₂₅ and R₂₆ are independently H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;
and wherein D₁-A₁-B₁ optionally forms a nitro group where A₁ is N;
and further wherein, when R₂ or R₅ is



X is =CH or =CF and Y₂ is =C, =CH, or =CF,

or X and Y₂ together with Q' form a three-membered ring in which Q' is -C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₂ is -CH-, -CF-, or -C(alkyl)-, where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group,

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₂ is -O-, -S-, -N(R'₁₂)-, -C(O)-, -C(R'₁₃)(R'₁₄)-, -C(S)-, or -C(CR'₁₃R'₁₄)-, wherein R'₁₂ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR'_{13a}-, NR'₁₃R'_{14a}-, -C(O)-R'_{13a}-, -SO₂R'_{13a} or -C(S)R'_{13a}, and R'₁₃ and R'_{14a} independently are H, F, or an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group;

A₂ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R_{16a}

wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are bonded, form a heterocycloalkyl group;

D₂ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;
and

B₂ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl
group, a heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl
group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an
acyl group;

and further wherein any combination of Y₂, A₂, B₂, and D₂ optionally can form a
cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;

R₃ and R₆ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl
group, an aryl group, a heteroaryl group, -C(O)R₁₇, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈,
or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a
heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

or, R₃ and R₆, together with the carbon atom to which they are attached, form a cycloalkyl
group or a heterocycloalkyl group;

R₇ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a
heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a
heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

or R₇, together with R₃ or R₆ and the atoms to which they are attached, forms a
heterocycloalkyl group;

R₂₀ is H, OH, or any suitable organic moiety; and

Z and Z₁ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl
group, an aryl group, a heteroaryl group, -C(O)R₂₁, -CO₂R₂₁, -CN, -C(O)NR₂₁R₂₂, -
C(O)NR₂₁OR₂₂, -C(S)R₂₁, -C(S)NR₂₁R₂₂, -NO₂, -SOR₂₁, -SO₂R₂₁, -SO₂NR₂₁R₂₂, -
SO(NR₂₁)(OR₂₂), -SONR₂₁, -SO₃R₂₁, -PO(OR₂₁)₂, -PO(R₂₁)(R₂₂), -PO(NR₂₁R₂₂)(OR₂₃),

PO(NR₂₁R₂₂)(NR₂₃R₂₄), -C(O)NR₂₁NR₂₂R₂₃, or -C(S)NR₂₁NR₂₂R₂₃,

wherein R₂₁, R₂₂, R₂₃, and R₂₄ are independently H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, an acyl group, or a thioacyl group, or wherein any two of R₂₁, R₂₂, R₂₃, and R₂₄, together with the atom(s) to which they are bonded, form a heterocycloalkyl group;

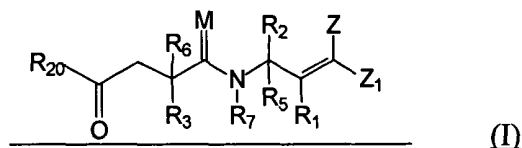
or Z₁, as defined above, together with R₁, as defined above, and the atoms to which Z₁ and R₁ are bonded, form a cycloalkyl or heterocycloalkyl group,

or Z and Z₁, both as defined above, together with the atoms to which they are bonded, form a cycloalkyl or heterocycloalkyl group;

or a pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof;

and wherein said compound, or pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof, has antipicornaviral activity with an EC₅₀ less than or equal to 10 μM in the HI-HeLa cell culture assay.

31. (Currently amended) A method of inhibiting the activity of a picornaviral 3C protease that comprises the step of contacting the picornaviral 3C protease with an effective amount of at least one compound ~~as defined in claim 1~~ or a ~~pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof~~ of the formula (I):

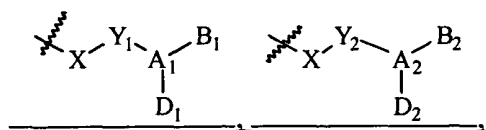


wherein

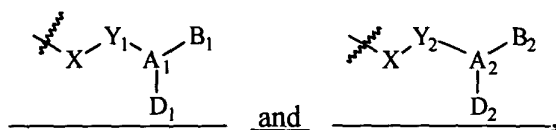
M is O or S;

R₁ is H, F, an alkyl group, OH, SH, or an O-alkyl group;

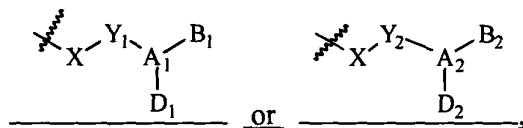
R₂ and R₅ are independently selected from H,



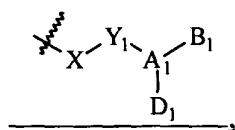
or an alkyl group, wherein said alkyl group is different from



with the proviso that at least one of R₂ or R₅ must be



and wherein, when R₂ or R₅ is



X is =CH or =CF and Y₁ is =CH or =CF,

or X and Y₁ together with Q' form a three-membered ring in which Q' is -

C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₁ is -CH-, -CF-, or -C(alkyl)-,

where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or,

together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group.

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₁ is -O-, -S-, -NR₁₂-, -C(R₁₃)(R₁₄)-, -

C(O)-, -C(S)-, or -C(CR₁₃R₁₄)-,

wherein R₁₂ is H or alkyl, and R₁₃ and R₁₄ independently are H, F, or

an alkyl group, or, together with the atoms to which they are bonded,

form a cycloalkyl group or a heterocycloalkyl group;

A₁ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R_{16a}

wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a

heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together

with the atom to which they are bonded, form a heterocycloalkyl group;

D₁ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;

and

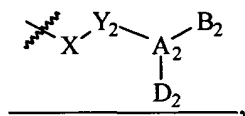
B₁ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈ or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

and with the provisos that when D₁ is the moiety ≡N with a lone pair of electrons capable of forming a hydrogen bond, B₁ does not exist; and when A₁ is an sp³ carbon, B₁ is not -NR₁₇R₁₈ when D₁ is the moiety -NR₂₅R₂₆ with a lone pair of electrons capable of forming a hydrogen bond, wherein R₂₅ and R₂₆ are independently H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;

and wherein D₁-A₁-B₁ optionally forms a nitro group where A₁ is N;

and further wherein, when R₂ or R₅ is



X is =CH or =CF and Y₂ is =C, =CH, or =CF,

or X and Y₂ together with Q' form a three-membered ring in which Q' is -C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₂ is -CH-, -CF-, or -C(alkyl)-, where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group,

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₂ is -O-, -S-, -N(R'₁₂)-, -C(O)-, -C(R'₁₃)(R'₁₄)-, -C(S)-, or -C(CR'₁₃R'₁₄)-,

wherein R'₁₂ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR'₁₃, -NR'₁₃R'₁₄, -C(O)-R'₁₃, -SO₂R'₁₃, or -C(S)R'₁₃, and R'₁₃ and R'₁₄,

independently are H, F, or an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group;

A₂ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R₁₆,

wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are bonded, form a heterocycloalkyl group;

D₂ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;
and

B₂ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

and further wherein any combination of Y₂, A₂, B₂, and D₂ optionally can form a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;

R₃ and R₆ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -C(O)R₁₇, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

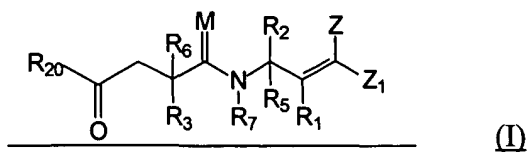
or, R₃ and R₆, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group;

R₇ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a

heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;
or R₇, together with R₃ or R₆ and the atoms to which they are attached, forms a
heterocycloalkyl group;
R₂₀ is H, OH, or any suitable organic moiety; and
Z and Z₁ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl
group, an aryl group, a heteroaryl group, -C(O)R₂₁, -CO₂R₂₁, -CN, -C(O)NR₂₁, R₂₂, -
C(O)NR₂₁OR₂₂, -C(S)R₂₁, -C(S)NR₂₁R₂₂, -NO₂, -SOR₂₁, -SO₂R₂₁, -SO₂NR₂₁R₂₂, -
SO(NR₂₁)(OR₂₂), -SONR₂₁, -SO₃R₂₁, -PO(OR₂₁)₂, -PO(R₂₁)(R₂₂), -PO(NR₂₁R₂₂)(OR₂₃),
PO(NR₂₁R₂₂)(NR₂₃R₂₄), -C(O)NR₂₁NR₂₂R₂₃, or -C(S)NR₂₁NR₂₂R₂₃,
wherein R₂₁, R₂₂, R₂₃, and R₂₄ are independently H, an alkyl group, a cycloalkyl
group, a heterocycloalkyl group, an aryl group, a heteroaryl group, an acyl group, or
a thioacyl group, or wherein any two of R₂₁, R₂₂, R₂₃, and R₂₄, together with the
atom(s) to which they are bonded, form a heterocycloalkyl group;
or Z₁, as defined above, together with R₁, as defined above, and the atoms to which Z₁
and R₁ are bonded, form a cycloalkyl or heterocycloalkyl group,
or Z and Z₁, both as defined above, together with the atoms to which they are bonded,
form a cycloalkyl or heterocycloalkyl group;
or a pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof;
and wherein said compound, or pharmaceutically acceptable prodrug, salt, active
metabolite, or solvate thereof, has antipicornaviral activity with an EC₅₀ less than or equal
to 10 μM in the HI-HeLa cell culture assay.

32. (Currently Amended) A method of inhibiting the activity of a rhinoviral protease that comprises the step of contacting the rhinoviral protease with an effective amount of at least one compound ~~as defined in claim 1~~ or a pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof ~~of the formula (I):~~

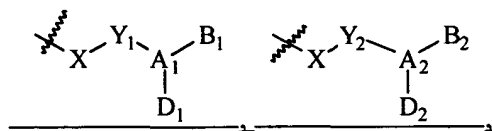


wherein

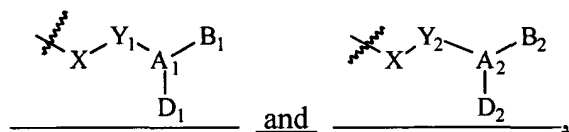
M is O or S;

R₁ is H, F, an alkyl group, OH, SH, or an O-alkyl group;

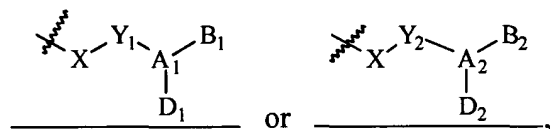
R₂ and R₅ are independently selected from H,



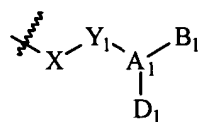
or an alkyl group, wherein said alkyl group is different from



with the proviso that at least one of R₂ or R₅ must be



and wherein, when R₂ or R₅ is



X is =CH or =CF and Y₁ is =CH or =CF,

or X and Y₁ together with Q' form a three-membered ring in which Q' is -

C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₁ is -CH-, -CF-, or -C(alkyl)-,

where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or,

together with the carbon atom to which they are attached, form a cycloalkyl

group or a heterocycloalkyl group.

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₁ is -O-, -S-, -NR₁₂-, -C(R₁₃)(R₁₄)-, -C(O)-, -C(S)-, or -C(CR₁₃R₁₄)-,

wherein R₁₂ is H or alkyl, and R₁₃ and R₁₄ independently are H, F, or an alkyl group, or, together with the atoms to which they are bonded, form a cycloalkyl group or a heterocycloalkyl group;

A₁ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R₁₆

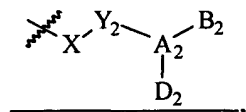
wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are bonded, form a heterocycloalkyl group;

D₁ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;
and

B₁ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇-, -SR₁₇-, -NR₁₇R₁₈-, -NR₁₉NR₁₇R₁₈-, or -NR₁₇-OR₁₈-,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

and with the provisos that when D₁ is the moiety ≡N with a lone pair of electrons capable of forming a hydrogen bond, B₁ does not exist; and when A₁ is an sp³ carbon, B₁ is not -NR₁₇R₁₈ when D₁ is the moiety -NR₂₅R₂₆ with a lone pair of electrons capable of forming a hydrogen bond, wherein R₂₅ and R₂₆ are independently H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;
and wherein D₁-A₁-B₁ optionally forms a nitro group where A₁ is N;
and further wherein, when R₂ or R₅ is



X is =CH or =CF and Y₂ is =C, =CH, or =CF,

or X and Y₂ together with Q' form a three-membered ring in which Q' is -C(R₁₀)(R₁₁)- or -O-, X is -CH- or -CF-, and Y₂ is -CH-, -CF-, or -C(alkyl)-, where R₁₀ and R₁₁ independently are H, a halogen, or an alkyl group, or, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group.

or X is -CH₂-, -CF₂-, -CHF-, or -S-, and Y₂ is -O-, -S-, -N(R'₁₂)-, -C(O)-, -C(R'₁₃)(R'₁₄)-, -C(S)-, or -C(CR'₁₃R'₁₄)-, wherein R'₁₂ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR'₁₃-, -NR'₁₃R'₁₄-, -C(O)-R'₁₃-, -SO₂R'₁₃-, or -C(S)R'₁₃-, and R'₁₃ and R'₁₄ independently are H, F, or an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group;

A₂ is C, CH, CF, S, P, Se, N, NR₁₅, S(O), Se(O), P-OR₁₅, or P-NR₁₅R₁₆,

wherein R₁₅ and R₁₆ independently are an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group, or, together with the atom to which they are bonded, form a heterocycloalkyl group;

D₂ is a moiety with a lone pair of electrons capable of forming a hydrogen bond;

and

B₂ is H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇-, -SR₁₇-, -NR₁₇R₁₈-, -NR₁₉NR₁₇R₁₈-, or -NR₁₇OR₁₈-,

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;

and further wherein any combination of Y₂, A₂, B₂, and D₂ optionally can form a cycloalkyl group, a heterocycloalkyl group, an aryl group, or a heteroaryl group;

R₃ and R₆ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -C(O)R₁₇, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;
or, R₃ and R₆, together with the carbon atom to which they are attached, form a cycloalkyl group or a heterocycloalkyl group;

R₇ is H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -OR₁₇, -SR₁₇, -NR₁₇R₁₈, -NR₁₉NR₁₇R₁₈, or -NR₁₇OR₁₈

wherein R₁₇, R₁₈, and R₁₉ independently are H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, or an acyl group;
or R₇, together with R₃ or R₆ and the atoms to which they are attached, forms a heterocycloalkyl group;

R₂₀ is H, OH, or any suitable organic moiety; and

Z and Z₁ are independently H, F, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, -C(O)R₂₁, -CO₂R₂₁, -CN, -C(O)NR₂₁R₂₂, -C(O)NR₂₁OR₂₂, -C(S)R₂₁, -C(S)NR₂₁R₂₂, -NO₂, -SOR₂₁, -SO₂R₂₁, -SO₂NR₂₁R₂₂, -SO(NR₂₁)(OR₂₂), -SONR₂₁, -SO₃R₂₁, -PO(OR₂₁)₂, -PO(R₂₁)(R₂₂), -PO(NR₂₁R₂₂)(OR₂₃), -PO(NR₂₁R₂₂)(NR₂₃R₂₄), -C(O)NR₂₁NR₂₂R₂₃, or -C(S)NR₂₁NR₂₂R₂₃,

wherein R₂₁, R₂₂, R₂₃, and R₂₄ are independently H, an alkyl group, a cycloalkyl group, a heterocycloalkyl group, an aryl group, a heteroaryl group, an acyl group, or a thioacyl group, or wherein any two of R₂₁, R₂₂, R₂₃, and R₂₄, together with the atom(s) to which they are bonded, form a heterocycloalkyl group;
or Z₁, as defined above, together with R₁, as defined above, and the atoms to which Z₁ and R₁ are bonded, form a cycloalkyl or heterocycloalkyl group,
or Z and Z₁, both as defined above, together with the atoms to which they are bonded, form a cycloalkyl or heterocycloalkyl group;

or a pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof;

and wherein said compound, or pharmaceutically acceptable prodrug, salt, active metabolite, or solvate thereof, has antipicornaviral activity with an EC₅₀ less than or equal to 10 μ M in the HI-HeLa cell culture assay.

33-34. (Canceled).